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SERVICES AND MANUFACTURING WORK HAND IN HAND*

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Many executives and policy makers discuss the manufacturing and services sectors of the economy either as if they were totally independent or as if services were inherently dependent on and inferior to manufacturing. The facts do not support such views. Services and manufacturing are mutually dependent and a healthy economy requires that both be efficient, innovative, and competitive in world markets. A balanced view of the economy today must start with a realization that many of the myths about services are unfounded -- services industries create value at rates as high as manufacturing, most service industries are capital intensive and have large scale competitors, and services substitute directly for manufactures in a wide variety of situations.[1] This article will detail some of the ways services and manufacturing are interdependent and why a recognition of that fact is vital for the future.

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* This article is based on a multi-year study of technology in services undertaken under the auspices of the National Academy of Engineering. The authors gratefully acknowledge the generosity of Bankers Trust, Bell & Howell, The Royal Bank of Canada, Braxton Associates, Bell Atlanticom, and American Express in providing financial support for this research. Fuller discussion of these same topics may be found in (1) J.B. Quinn, J.J. Baruch, and P.C. Paquette, "Exploiting the Manufacturing-Services Interface," *Sloan Management Review*, Summer 1988, and (2) J.B. Quinn, "Services Technology and Manufacturing: Cornerstones of the U.S. Economy," in B. Guile and J.B. Quinn (eds.), *Managing Innovation: Cases from the Services Industries*, National Academy Press, Washington, D.C., 1988.

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Although complete intersectoral sales figures are not available, it is clear that the customers for certain services, e.g., trucking and railroads, are primarily manufacturing and other goods-producing firms. In the same way, it is clear that the customers for certain manufactures, e.g., medical equipment and paving and road construction equipment, are primarily service providers. Service providers represent the majority of customers for the high technology telecommunications and information processing equipment manufacturing industries, as Stephen Roach's studies[2] indicate. This should not be surprising given that 72 percent of U.S. gross national product is made up by the services sector and such "information technologies" are needed in almost any business today. There are, of course, some manufacturers that supply goods only to other manufacturers and some service industries that specialize in serving other service providers.

While the argument has been made that certain service industries would wither away if U.S. manufacturing were not a strong and growing part of the economy, the reverse might also be said for certain manufacturers. And, it is important to recognize that many of the services which are perceived to be dependent on U.S. manufacturing strength would still be needed regardless of where the product was manufactured. Imported goods still need to be stored, advertised, transported, distributed, financed, and repaired.

For instance, the ability of airlines to provide fast, efficient, and reasonably priced air transportation is based on their own internal management systems, on the availability of competitively priced, innovative aircraft and related equipment, and on the public infrastructure of airports and air traffic control. In turn, the ability of airframe manufacturers to make competitively priced, innovative aircraft that meet the needs of airlines around the world is based on not only the availability of reasonably priced raw materials and efficient manufacturing technologies and management, but on a vast array of internally and externally supplied services. Suppliers and customers are inherently dependent on each other. Over time the balance of power between the two can shift, however, and many people have failed to recognize the impact technology, deregulation, and other factors have had on the balance of power between service providers as suppliers and customers and manufacturers as customers and suppliers.

- As the number of major airlines (service providers) declined through consolidation due to deregulation and the introduction of wide bodied jets, aircraft manufacturers had to modify their strategies. The number of U.S. lead customers for a firm like Boeing has shrunk to a handful of large "megacarriers," each with a more powerful bargaining position than before. The military no longer can provide the "first order" volumes necessary to launch a commercial aircraft. Consequently, to obtain essential economies of scale, yet satisfy each customer, companies like Boeing have invested heavily (over $800 million) in flexible automation, allowing them to modify their aircrafts' internal seating, baggage storage, maintenance system, and customer convenience patterns to suit virtually any requirement their major customers might conceive over the useful life of the aircraft. Boeing is even proposing to restructure its overall cabin configuration (in its 7J7 aircraft) in response to the recommendation of SAS's President J. Carlzon that airline seating patterns would be optimized if the cabin cross-section were a horizontal elipse rather than a circle or vertical elipse. The coming deregulation of Europe's airlines will only lead to further concentration in the world's airline industry.

- Even when buyers have not consolidated into large individual units, services technologies allow them to achieve similar bargaining power. For example, a team of airline and manufacturer-supplier experts, coordinated by the Air Transport Association, has created an automated parts procurement system (Spec 2000) that is expected to save millions of dollars and can be accessed using a personal computer. Spec 2000 is a computerized compendium of manufacturers' catalogs including more than a million part numbers and an automated

computer-to-computer ordering system. Not only does the system allow an airline to get comparative specification and quotation data, but it also gives information about how vendors meet their delivery and performance criteria, thus increasing the information leverages of all potential purchasers.[3]

As service firms grow in sophistication, scale, innovativeness and scope, their leverage as suppliers to manufacturers increases. Deregulation has created more powerful transportation companies with handling capabilities that can increase shipping efficiencies enormously, and these companies have increased their bargaining power with shippers. Some companies have maintained private trucking fleets primarily to counterbalance that increased power.[4] And large money-center banks now have the information, instant capital access, and worldwide connections to manage a company's financial assets with a knowledge base and leverage few manufacturers can equal.

Within manufacturing, 75 percent of all costs and an even higher percentage of value added are due to service activities.[5] The major value added to a product is typically due less to its basic commodity value (e.g., producing the grain and vegetables in a processed food or the "body in white" for an automobile) than the styling features, perceived quality, subjective taste, and marketing presentation added by "service" activities inside or outside the company. Except in continuous process industries (like oil refining), planning, accounting, inventory, quality assurance, transportation, design, advertising, and distribution costs generally outweigh direct labor costs by factors of between three and ten to one. Therefore, many aspects of a manufacturer's cost competitiveness depend intimately on such service activities.

TABLE 1

U.S. vs. Japanese Productivity in Services*

	Japan		U.S.		Ratio: U.S. Output per Hour as a % of Japanese Output per Hour
	1970	1980	1970	1980	1980
Private Domestic Business	3.59	6.01	9.40	10.06	167%
Agriculture	1.37	2.38	16.53	18.36	771%
Selected Services					
Transp. & Comm.	3.86	5.66	9.29	13.14	232%
Elect., Gas, Water	14.01	19.74	21.98	25.38	129
Trade	2.88	4.53	6.88	7.92	175
Fin. & Insur.	6.69	12.03	8.21	8.20	68
Bus. Services	2.29	3.60	7.69	7.59	211
Manufacturing	3.91	8.00	7.92	10.17	127%

* Measured as output per hour in 1975 dollars.

Source: *Measuring Productivity: Trends and Comparisons from the First International Productivity Symposium*, Tokyo, Japan, 1983, UNIPUB, New York, 1984.

In most areas, the efficiency of U.S. service industries has been more than competitive with our international trading partners (see table above). In addition, because of the sophistication and economies of scale and scope that technology enables service companies to bring to bear, manufacturers have the option to purchase efficient, effective services rather than produce them in-house. The existence of a competitively provided external service function serves as a powerful motivator for internal service groups to innovate, control costs, and increase quality and as a benchmark for management decision making. With service enterprises growing rapidly in scale and technical sophistication, the opportunities are expanding for manufacturers to leverage their own internal innovation programs by exploiting those of service suppliers. As technology creates new capabilities, manufacturers need to constantly reassess when to produce their own services and when to buy them.

While cost is an important factor, it is in the area of adding value that service activities are the most critical. A less expensive but poorly conceived aircraft benefits neither the airframe manufacturer nor the airlines. Understanding what the customer needs and wants and designing such a product is the key to success. Properly managing market intelligence, research and development, product engineering, quality assurance, and other service functions can make the difference.

- For example, in the automobile industry, designing and introducing a new car line are major components of overhead costs and significant contributors to the value the customer perceives. At Ford this design cycle had taken five to six years and could cost several billion dollars. In 1980, Ford's CEO and president decided to undertake a new "simultaneous design" process for their new upper-middle line, which became the Taurus/Sable cars. To integrate design from research to marketing, they established a core group, called Team Taurus, that had a full-time representative from all of the critical groups with Ford -- product design, component engineering, manufacturing, sales, and corporate headquarters (virtually all service operations). Instead of moving the design step-by-step along these groups to the marketplace -- with numerous conflicts and design reworks -- Team Taurus involved everyone from the outset. The result was that the Taurus/Sable introduction cost some $250 million less than its budget and the cars were exceptionally successful in the marketplace. Future cars at Ford will probably be designed using the same process in only three to four years -- potentially saving Ford hundreds of millions of dollars more and ensuring that manufacturing design is much closer to the customer.

It is this need to get closer to the customer which ties many manufacturing firms to wholesalers and retailers of their products. Marketing strategists have documented that as personal affluence or the sheer size of markets grows, there is an increasing demand for differentiated, individualized, or customized products. The key to sales in such markets is the ability to produce the desired variety at reasonable costs and provide the fastest response time at lowest system costs. U.S.-based manufacturers that are able to link flexible production systems directly to their customers' market intelligence networks should have very real competitive advantages (in timing, inventory, and transportation costs) over foreign producers. This is clearly demonstrated by the resurgence of the U.S. textile and apparel manufacturing industries -- which is due in large part to "quick response" reordering systems and coalitions between textile mills, apparel manufacturers, and retail chains.

Thus the services and manufacturing sectors of the economy are intertwined to a great degree -- as customers and suppliers of each other and as critical inputs to each other's competitiveness (both from a cost standpoint and from the standpoint of value added, innovation, etc.). Global competition increases that interdependence. Improved telecommunications, air transport, and cargo-handling technologies have forced virtually all manufacturers (regardless of size) to consider their supply

sources, markets, and competition on a worldwide scale -- or lose their competitive position. Many service firms also are being faced with increased competition both in the international arena and within the U.S., and must evaluate both customers and suppliers on a global basis.

Effective coordination of the international operations of large manufacturing enterprises -- and those of many much smaller companies -- now depends heavily on services technologies and efficiencies. Economies of scale in international operations today are often due more to the corporation's service capabilities -- i.e., technology transfer, marketing skills, financial services, logistics, etc. -- than its plant scale economies. A significant component of a multinational company's competitive edge comes from its capacity to handle cross-border data and services flows.[6] The availability of various parts, equipment, and equipment support on a worldwide basis is essential to the coordination and competitive position of multinational service providers (such as international airlines) as well. These natural connections between a country's manufacturers and service firms have led many U.S. manufacturers and service providers into the international market, but are a cause of concern as foreign-based manufacturers establish plants in the U.S.

Recognition that services and manufacturing work hand in hand is essential to national policy discussions. Attempting to strengthen one sector without strengthening the other would be a misguided policy, and spending time denigrating the service sector does manufacturers little good. Unfortunately, until now there has been a tendency to focus competitiveness policy discussions almost exclusively on manufacturing issues. As we have illustrated, effective service activities actually create new markets for manufactured goods, result in lower costs for manufacturers, and are central to increasing the value added by manufactured products. Similarly, manufacturers are important suppliers, customers, and innovation partners for service providers.

Not only are services and manufacturing mutually reinforcing, but the same policy approaches that stimulate or retard one sector will generally affect the other in similar ways. Critical factors affecting both include the high relative cost of U.S. capital, the skill and literacy levels of the work force, and the development and application of frontier technologies (particularly those related to communications, health care, information handling, and public transport).[7] From a corporate strategy viewpoint, it is important for executives to recognize the interdependence of services and manufacturing and actively strive to exploit the opportunities presented by a partnership approach to the services-manufacturing relationship.

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[1] J.B. Quinn, J.J. Baruch, and P.C. Paquette, "Technology in Services," *Scientific American*, December 1987, pp. 50-58.

[2] S. Roach, "Technology and the Service Sector: America's Hidden Competitive Challenge," in B. Guile, J.B. Quinn (eds.), *Technology in Services: Policies for Growth, Trade, and Employment*, National Academy Press, Washington, D.C., 1988.

[3] "Spec 2000 weds airline procurements systems with automatic technology," *Air Transport World*, January 1987, p. 66.

[4] J. Johnson and K. Schneider, "Private Trucking: A Dinosaur?" *Business Horizons*, January 1988, pp. 73-78.

[5] Office of the United States Trade Representative, U.S. Trade in Services, Washington, D.C., December 1983; T. Vollmann, "The Effect of Zero Inventories on Cost (Just in Time)," in *Cost Accounting for the '90s: The Challenge of Technological Change*, National Association of Accountants, Montvale, NJ, 1986.

[6] K. Sauvant, *International Transactions in Services: The Politics of Transborder Data Flows*, Westview Press, Boulder, Colorado, 1986.

[7] J.B. Quinn and T.L. Doorley, "Key Policy Issues Posed by Services," in B. Guile and J.B. Quinn (eds), *Technology in Services*, National Academy Press, Washington, D.C., 1988.

SERVICES ECONOMIC HIGHLIGHTS

CSI

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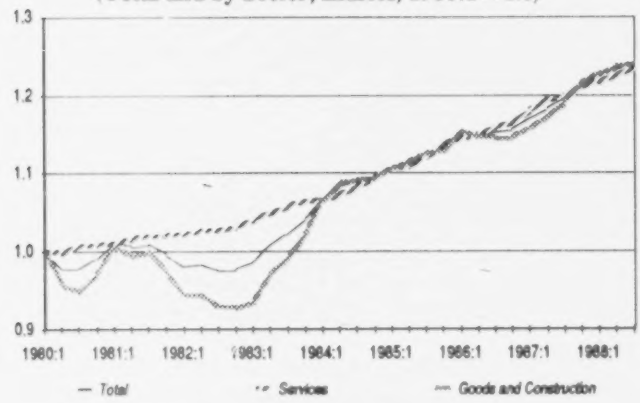
Services At a Glance

- ***Services GNP Measured by Expenditures***—or the service components of expenditures by consumers, businesses, government and the net service export balance—increased 3.6%, at an annual rate, in the third quarter of 1988. Goods and Construction GNP together increased 1.4%.
- The ***Service Sector Leading Index***, which leads the sector's activity by about six months, rose at an annual rate of 0.8% in November, while the Commerce Department's Index of Leading Indicators (LEI) grew 1.2%. The annual growth rate of the Coincident Index, reflecting current economic conditions for the Service Sector, was 3.1%.
- ***Employment*** growth in Service-Producing industries continued to be robust through November. An additional 3.023 million persons have joined the Services workforce in the last twelve months. For all of 1987, the increase was 2.5 million.
- ***Personal Consumption Expenditures*** on services increased at a substantial annual rate of 4.4% in the third quarter, following a 2.8% gain in the second quarter.
- ***Prices of Consumer Services*** were up 4.8% in November compared with the price level a year ago.
- ***Profits*** of Service-Producing industries rose 3.8% in the third quarter of 1988 over the third quarter of 1987.
- ***Plant and Equipment Expenditures*** by Service-Producing industries increased at an annual rate of 2.7% in the third quarter, down from a large 20% increase in the second.
- The ***Stock Price Index*** for Services declined 2.8% in November, following larger gains in September and October.
- ***Net Services Exports*** posted a surplus of $757 million in the third quarter of 1988, following a deficit of $837 million in the second quarter. The balance on true services trade was $2.4 billion.

Bottom Line: Service Sector economic growth picked up in the third quarter with continued strong employment gains. Growth rates in the Goods Sector continue at a moderate pace; much as in recent months.

The Service Economy refers to the total economy, in which the Service Sector is the dominant factor. The Service Sector represents 68% of real production GNP and 76% of employment. Major segments are: Communications; Transportation; Public Utilities; Finance, Insurance and Real Estate; Wholesale and Retail Trade; Government; and "Service," a diverse category including Business Services, Personal Services and Health Services.

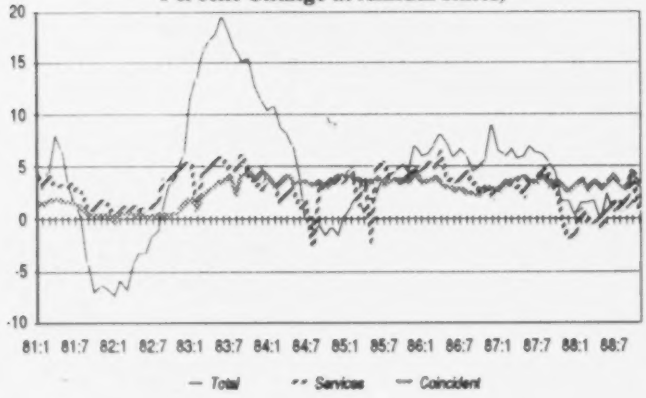
Chart 1
Real Gross National Product
(Total and by Sector, Indices, 1980:1 = 1.0)



Service Expenditures GNP Up

Third quarter real Services GNP—measured by expenditures—increased at an annualized 3.6%, following a 2.8% growth rate in the second quarter. The Goods component—including Construction—increased 1.4%, slower than the 3.1% posted in the second quarter. Goods less Construction GNP increased 1.5%. Total GNP increased 2.4% in the third quarter, after a 2.9% growth in the second.

Chart 2
Leading Economic Indicator Indices
(Total Economy and Service Sector, Six-Month Smoothed Percent Change at Annual Rates)

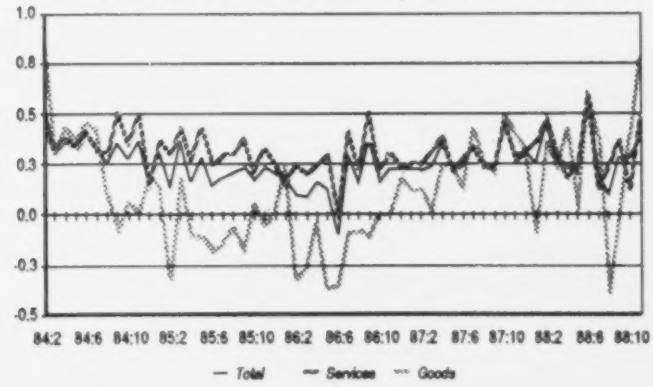


Small Gains in Services Leading Index

The Leading Index for the Service Sector increased 0.8% in November, following a large 3.4% rise in October. The increase in the Coincident Index for Services slowed to 3.1%, following a large 4.6% rise in October. The Leading Indicator Index for the total economy rose 1.2% in November and 1.7% in October.

The Service Sector Indices are produced by the Center for International Business Cycle Research, Columbia University.

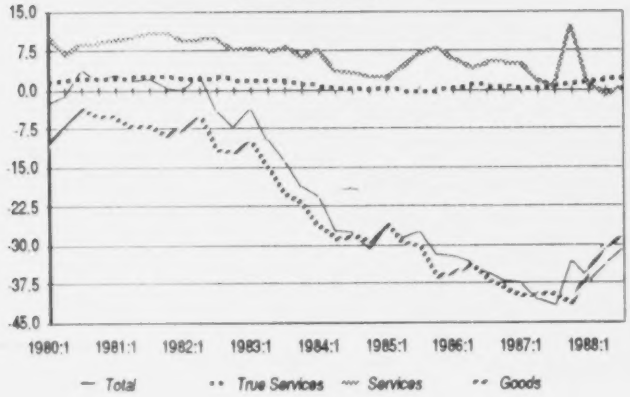
Chart 3
Employment Growth
(Total and by Sector, Monthly Percent Change)



Service Sector Employment Up

Service Sector employment gains continue to be strong. In November, Service Sector employment increased 344,000 persons, while over the last twelve months the increase was over 3 million persons. Gains in the Goods Sector are steady but slower. In November the increase was 119,000, while the twelve-month gain was 737,000.

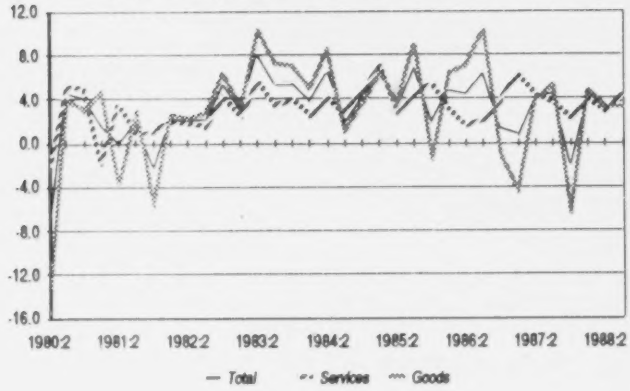
Chart 4
Current Account Balance and Components
(Billions of Dollars)



Service Balance Back in the Black; Trade in Services in Surplus

The total Services trade balance showed a small surplus again, following a small deficit in the second quarter. The surplus on the true service balance continues to be strong at $2.4 billion, following a downward revised $2.3 billion in the second quarter. The merchandise trade deficit improved to $28.5 billion, from $30.2 billion in the second quarter.

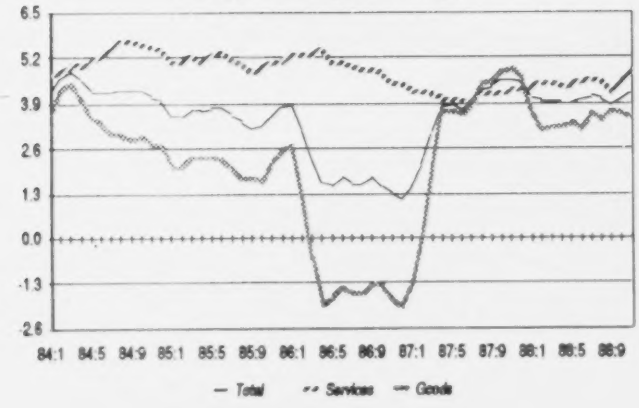
Chart 5
Real Personal Consumption Expenditures
(Quarterly Percent Change, Annual Rates)



Spending on Services Up 4.4%

In the third quarter of 1988, personal consumption expenditures on Services increased at an inflation-adjusted 4.4% annual rate, while personal expenditures on Goods increased 3.3%. In the second quarter, consumption expenditures on Services were up 2.8%, and on Goods, a revised 3.2%.

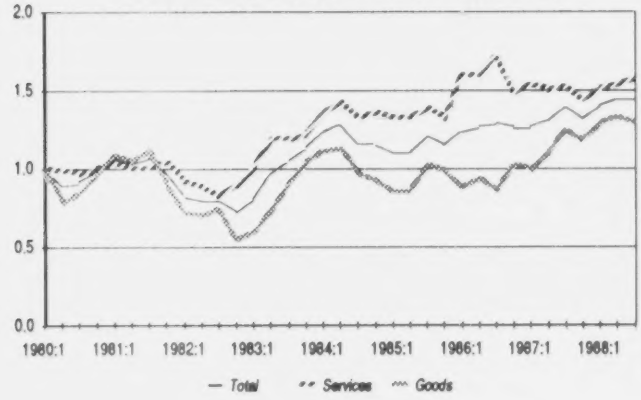
Chart 6
Consumer Price Indices
(Percent Change, Year Ago)



Service Inflation Moves Higher

The year-over-year price increase in the Service component of the Consumer Price Index (CPI-U) for November accelerated to a 4.8% rate from a year-over-year 4.2% increase in September. The year-over-year increase in the Goods component of the CPI-U slowed to 3.5%, from 3.7% in September. The overall CPI-U increased 4.2% in November, following a year-over-year increase of 4% in October.

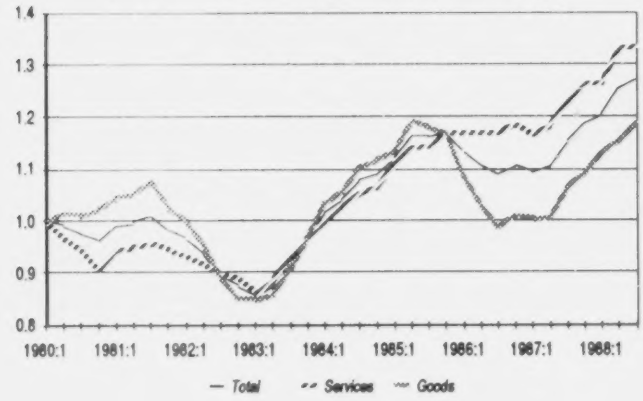
Chart 7
Corporate Profits for Domestic Industries
(Total and by Sector, Indices, 1980:1 = 1.0)



Service Sector Profits Rise

In the second and third quarters of 1988, profits of Service-Producing industries increased 2.6% and 3.8%, respectively, following year-over-year declines in the previous five quarters. Profits of Goods-Producing industries rose 4.1%, compared to a year ago, following a 22.1% increase in the second quarter.

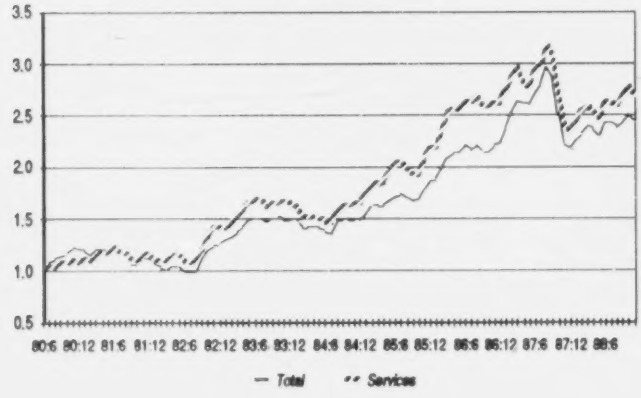
Chart 8
Real Expenditures on Plant and Equipment
(Total and by Sector, Indices, 1980:1 = 1.0)



Services Investment Falters

Service industries increased real expenditures on plant and equipment (P&E) by 2.7%, at an annual rate, in the third quarter, following a large 20%, in the second quarter. Goods industries increased capital outlays 13.4%, following a revised 7.7% in the second quarter. Overall spending on P&E increased 7.1% in the third quarter, following a 14.8% increase in the second.

Chart 9
S&P 500 and Services Stock Price Indices
(1980:6 = 1.0)



Stock Prices Lower

The Services Stock Price Index and S&P 500 declined in November, 2.8% and 2.3%, respectively, reversing almost all of the October gains. Both indices are now only marginally higher than September levels. The Services Stock Price Index is based on S&P indices for 13 service industries and is compiled by the Center for International Business Cycle Research.

FOREIGN DIRECT INVESTMENT IN U.S. SERVICE INDUSTRIES: NEW TRENDS EMERGING

Allen Sinai and Zaharo Sofianou

At the end of 1987 foreign investors owned a total of $261.9 billion of direct investments in the United States. Of that, about 48% was in Non-Goods producing industries (i.e., Service Industries-including Real Estate) and 52% was in Goods-Producing industries (i.e. Manufacturing, Petroleum and Mining).

The overall split of outstanding foreign direct investment between Goods and Non-Goods producing industries has been roughly equal for some time now. However, there has been a change within the two broad categories. Within Services, foreign investment has been increasing in industries such as Professional and Business Services and in Hotels -- areas traditionally not associated with foreign direct investment. Similarly, recent foreign direct investment in the Goods-Producing Industries concentrated in the Chemicals and Processed Food industries with slower investments in Primary and Fabricated Metals and Machinery.

Foreign Direct Investment in Service Industries is Currently Concentrated in Wholesale and Finance -- Europeans Lead in Overall Investment

Traditionally, foreign direct investment in Service Industries was concentrated in Wholesale and Retail Trade as well as in Banking, Insurance and Finance. Of total outstanding foreign direct investment in Service Industries, the largest by far is in *Wholesale Trade*. This area accounts for $37.6 billion, or 30% of total foreign investments in Service Industries.

Japan owns $14.7 billion of the total foreign assets in Wholesale Trade, mostly in Motor Vehicles and Parts in order to facilitate the distribution and sale of Japanese car imports. European investments in Wholesale Trade industries stand at $18.3 billion, including $7 billion belonging to the United Kingdom and $5 billion to Germany. Canada's investments in Wholesale Trade Industries amount to $2.4 billion.

While foreign direct investment is greatest in the Wholesale Trade Industry and has grown $16.5 billion over the past five years, the rate of growth of additional investments has recently slowed. In 1987 the increase in foreign direct investments in Wholesale Trade was $3.6 billion, down from $4.9 billion in 1986 and $4.5 billion in 1985.

Foreign Investments in *Real Estate* -- (included in the Service Industries since it produces intangible goods) stands at $24.5 billion, up $10 billion from 1983. Europe owns $10.7 billion, of which $5.5 billion belongs to the United Kingdom and $3.3 billion to the Netherlands. Japan owns $4.4 billion, while countries in Latin America own $4.2 billion, including $3.3 billion by the Netherlands Antilles. Foreign investments in Real Estate are popular largely because of the small price fluctuations and the fact that values tend to appreciate -- both of which offer security to new investors.

Investment in the *Insurance Industry* totals close to $16 billion, almost double its level five years ago. Life insurance accounts for the largest part of this figure, ($9.4 billion). Most of the growth of investments in the Insurance Industry took place in 1985 and 1986, with only marginal growth in 1987. Nearly all of the Insurance Investments ($13.1 billion) are owned by European countries, including $6 billion by the United Kingdom. While Japan's proportion is undisclosed, the amount must be very small -- about $200 million.

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Table 1
Foreign Direct Investment Position in the U.S.
(Billions of Dollars, 1987)

	All Industries	Goods					Non-Goods							
		Total	Mining	Petro-leum	Manufa cturing	Chem-icals	Total	Wholesale Trade	Retail Trade	Bank -ing	Other Finance	Insur-ance	Real Estate	Oth-er*
All Countries	261.9	132.0	5.6	35.4	91.0	30.4	129.9	37.6	9.5	13.8	8.0	16.0	24.5	20.5
Canada	21.7	9.7	0.8	1.4	7.5	0.4	12.0	2.4	1.2	1.4	0.5	1.6	3.4	1.6
Europe	178.0	105.0	1.6	32.8	70.6	27.6	73.0	18.4	7.2	6.3	5.9	13.1	10.7	11.3
Germany	19.6	9.3	0.3	0.0	9.0	4.7	10.3	5.0	1.0	0.4	0.6	1.6	1.1	0.6
Netherlands	47.0	16.5	0.3	NA	16.1	6.0	15.5	2.2	1.8	2.5	2.6	3.1	3.3	NA
United Kingdom	74.9	23.9	0.4	NA	23.5	9.1	31.6	7.0	3.9	1.9	NA	6.1	5.5	7.3
Japan	33.4	5.3	NA	0.0	5.2	0.5	27.8	14.7	0.3	3.4	2.6	NA	4.4	2.4
Australia, New Zealand, South Africa	6.6	3.2	NA	0.1	3.1	0.0	1.1	0.2	0.1	0.0	0.1	NA	0.3	0.4
Latin America	15.3	5.1	0.7	0.7	3.7	1.7	10.2	1.7	0.7	1.8	-1.2	1.1	4.2	1.9
Netherlands Antilles	8.9	2.6	0.0	0.3	2.3	1.4	6.2	0.6	0.5	NA	0.3	NA	3.3	1.5
Middle East	5.1	0.3	0.0	NA	0.3	0.0	1.7	0.1	0.0	0.6	0.2	0.0	0.9	NA
Addendum: OPEC	5.0	0.2	0.0	NA	0.2	0.0	1.4	0.1	0.0	0.4	0.0	0.0	0.8	NA

** Includes Agriculture, Forestry and Fishing*

NA= Not available, to avoid disclosure of data on individual companies.

Sources: The Boston Company Economic Advisors, Inc., and U.S. Commerce Department.

Foreign direct investment in U.S. *Banks* stands at $13.85 billion, up from $8.7 billion in 1983. Europe owns $6.3 billion with $2.5 billion belonging to the Netherlands and $1.9 billion to the United Kingdom. Japan and Canada own $3.4 billion and $1.4 billion, respectively. Total foreign direct investment in *Nonbank Financial Institutions* stands at $8 billion. European assets are $5.9 billion, while Japanese assets are $2.6 billion.

Investments in *Retail Trade*, which includes Restaurants, stands at $9.6 billion, up $4.1 billion from 1983. The largest investor is the United Kingdom, with $3.9 billion out of a total European ownership of $7.2 billion. Canada owns $1.1 billion, and Japan $300 million.

New Trends: In Which Service Industries is Foreign Direct Investment Growing Fastest?

The fastest rate of growth in foreign direct investment in 1987 has been in an area labelled "Other," which includes Service Industries like Transportation, Communication, Public Utilities, Hotels, Business Services such as Advertising, Management Consulting, Employment Agencies, Motion Picture Services, Accounting, Auditing, Health and Legal and Educational Services. The "Other" category also includes non-service industries such as Agriculture, Forestry and Fishing.

Excluding Agriculture, Forestry and Fishing, foreign direct investment in the remaining "Other" categories grew $6.32 billion in 1987 -- mostly in Business Services and Hotels. While foreign investments in these industries has been the highest in terms of absolute dollar amounts, the rate of growth has also been high over the past five years. Since 1983 investments in "Other" Service Industries increased fourfold, to stand at $15.34 billion in 1987, up from $3.65 billion in 1983. The rate of growth of foreign direct investments in Hotels and Business Services was even higher in 1987. The outstanding foreign investments in these industries doubled, while it is now six times higher than it was in 1983.

Table 2
Foreign Direct Investment in Services Industries
(Billions of Dollars)

	1983	1986	1987	Change (1983 to 1987)	Change (1986 to 1987)
Total Services	64.43	109.43	124.72	60.29	15.30
Wholesale Trade	21.03	34.00	37.58	16.55	3.58
Motor Vehicles and Equipment	7.05	12.35	12.96	5.91	0.61
Metals and Minerals, Except Petroleum	3.35	3.58	3.17	-0.18	-0.42
Electrical Goods	2.11	4.24	4.52	2.42	0.28
Machinery, Equipment, and Supplies	2.70	3.71	4.59	1.89	0.87
Groceries and Related Products	1.05	2.19	2.57	1.52	0.38
Retail Trade	5.48	8.92	9.55	4.06	0.62
Food Stores, and Eating & Drinking Places	2.11	3.62	3.91	1.81	0.29
Other	3.38	5.30	5.64	2.26	0.33
Banking	8.70	12.39	13.85	5.15	1.45
Finance, Except Banking	2.27	7.24	7.98	5.71	0.74
Insurance	8.67	15.35	15.95	7.29	0.61
Life Insurance	4.01	9.36	9.22	5.21	-0.14
Other	4.66	5.98	6.73	2.07	0.75
Real Estate	14.64	22.51	24.48	9.84	1.97
Other Service Industries	3.65	9.02	15.34	11.68	6.32
Transportation	1.26	1.80	2.36	1.11	0.56
Hotels and Other Lodging Places	0.52	1.08	3.18	2.66	2.10
Business Services	0.83	2.59	4.91	4.08	2.32
Other Services *	0.51	1.80	3.03	2.52	1.22
Services	2.08	6.72	12.40	10.31	5.67

* *Includes accounting, auditing, bookkeeping health, legal, and educational services.*

Source: Bureau of Economic Analysis and The Boston Company Economic Advisors, Inc.

Why the Change in Trends?

While one can only speculate as to the change in preferences of foreign direct investors in the United States, it is safe to say that the shift from investing more in "traditional Service Industries" to "non-traditional Service Industries (traditional and non-traditional only as far as direct investment is concerned) is most likely due to higher profitability in those industries. Investments in Hotels, for example, are considered to be safe — based on the same principle as investments in Real Estate.

Business Services, however, are often smaller concerns and although they can be very profitable, they may have a higher risk attached. Nevertheless, the most likely explanation is that foreign investors are now becoming more familiar with a greater number of smaller U.S. industries and companies — having first invested in the larger and more well known industries — and feel confident enough to invest in previously unfamiliar areas. The high growth of foreign direct investment in "non-traditional" Service Industries — particularly the Business Services — will probably continue since there are still areas that are being "discovered" by foreign investors.

Table 1
Summary of the Service Economy
(Billions of 1982 Dollars, SAAR, Except Where Indicated)

	1987:2	1987:3	1987:4	1988:1	1988:2	1988:3	1983	1984	1985	1986	1987
Gross National Product	3823.0	3865.3	3923.0	3956.1	3985.2	4009.4	3279.1	3501.4	3618.7	3721.7	3847.0
Services	1797.2	1806.6	1822.3	1833.4	1846.1	1862.8	1585.5	1625.2	1684.4	1738.1	1801.1
Goods and Construction	2025.8	2058.6	2100.6	2122.7	2139.1	2146.7	1693.6	1876.3	1934.5	1983.7	2045.9
Construction	380.2	381.1	386.7	374.6	376.7	377.7	326.6	367.1	380.8	384.7	382.6
GNP—Product Measure	NA	NA	NA	NA	NA	NA	3279.1	3501.4	3618.7	3721.7	3847.0
Services	NA	NA	NA	NA	NA	NA	2192.8	2312.0	2407.8	2498.9	2595.4
Goods	NA	NA	NA	NA	NA	NA	1022.7	1132.3	1176.1	1190.6	1228.9
Manufacturing	NA	NA	NA	NA	NA	NA	675.5	757.9	786.8	804.6	839.5
Agric./Mining/Construction	NA	NA	NA	NA	NA	NA	327.2	374.4	389.3	386.0	389.4
Consumption Expenditures	2516.6	2545.2	2531.7	2559.8	2579.0	2603.8	2146.0	2249.3	2354.8	2455.2	2520.9
Services	1235.5	1246.8	1253.6	1265.9	1274.8	1288.9	1062.7	1100.3	1152.3	1190.7	1239.5
Goods	1281.1	1298.4	1278.1	1293.8	1304.2	1314.9	1083.3	1149.0	1202.5	1264.5	1281.5
Plant and Equipment Expenditures	374.7	391.2	403.1	408.9	424.1	431.6	307.0	358.0	391.6	376.3	384.9
Services Industries	221.4	229.0	236.9	236.4	248.2	249.9	170.4	193.6	213.7	219.7	226.3
Goods Industries	153.3	162.2	166.2	172.5	175.8	181.7	136.6	164.4	177.9	156.6	158.6
Corporate Profits— Billions of Dollars	219.2	234.6	222.2	236.6	243.1	243.8	166.6	203.2	191.4	212.8	222.3
Service Industries	125.4	127.6	120.5	126.0	128.6	132.4	96.4	114.5	111.8	133.4	125.4
Goods Industries	93.8	107.0	101.7	110.6	114.5	111.4	70.2	88.8	79.7	79.4	96.8
Current Account Balance— Quarterly rates	-40.9	-42.0	-33.5	-36.9	-33.7	-30.9	-46.3	-107.1	-115.1	-138.8	-154.0
Services Balance	1.8	0.7	12.0	1.4	-0.8	0.8	30.3	17.5	22.1	21.0	19.8
True Services Balance*	0.6	0.8	1.2	1.6	2.3	2.4	6.6	2.0	0.4	3.3	3.1
Merchandise Trade Balance	-39.6	-39.7	-41.2	-35.2	-30.2	-28.5	-67.1	-112.5	-122.1	-144.5	-160.3

* *True Services Balance is the balance on Service exports and imports excluding receipts and payments on investments and government transactions.*

Sources: Bureau of Economic Analysis and The Boston Company Economic Advisors, Inc.

Table 2
Summary of the Service Economy
(Percent Change, SAAR, Except Where Indicated)

	1987:2	1987:3	1987:4	1988:1	1988:2	1988:3	1983	1984	1985	1986	1987
Gross National Product	4.9	4.4	6.0	3.4	2.9	2.4	3.6	6.8	3.4	2.8	3.4
Services	4.3	2.1	3.5	2.4	2.8	3.6	2.5	2.5	3.6	3.2	3.6
Goods and Construction	5.5	6.5	8.2	4.2	3.1	1.4	4.6	10.8	3.1	2.5	3.1
Construction	-2.3	0.9	5.9	-12.5	2.2	1.1	9.1	12.4	3.7	1.0	-0.5
GNP—Product Measure	NA	NA	NA	NA	NA	NA	3.6	6.8	3.4	2.8	3.4
Services	NA	NA	NA	NA	NA	NA	3.6	5.4	4.1	3.8	3.9
Goods	NA	NA	NA	NA	NA	NA	2.5	10.7	3.9	1.2	3.2
Manufacturing	NA	NA	NA	NA	NA	NA	6.4	12.2	3.8	2.3	4.3
Agric./Mining/Construction	NA	NA	NA	NA	NA	NA	-4.2	7.8	4.0	-0.8	0.9
Consumption Expenditures	4.2	4.5	-2.1	4.4	3.0	3.8	4.7	4.8	4.7	4.3	2.7
Services	4.4	3.6	2.2	3.9	2.8	4.4	3.5	3.5	4.7	3.3	4.1
Goods	4.0	5.4	-6.3	4.9	3.2	3.3	5.8	6.1	4.7	5.2	1.3
Plant and Equipment Expenditures	4.3	17.6	12.1	5.8	14.8	7.1	-1.1	16.6	9.4	-3.9	2.3
Services Industries	5.9	13.8	13.7	-0.8	20.0	2.7	0.3	13.6	10.4	2.8	3.0
Goods Industries	2.0	23.2	9.9	15.2	7.7	13.4	-2.9	20.3	8.2	-12.0	1.2
Corporate Profits (%Ch Year-Over-Year)	2.7	8.0	4.9	11.1	10.9	3.9	27.0	22.0	-5.8	11.1	4.5
Service Industries	-5.7	-11.0	-2.9	-1.7	2.6	3.8	31.7	18.7	-2.4	19.4	-6.0
Goods Industries	16.5	45.0	16.0	30.4	22.1	4.1	20.9	26.5	-10.3	-0.4	22.0

Sources: Bureau of Economic Analysis and The Boston Company Economic Advisors, Inc.

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Table 3
Summary of the Service Economy
(Monthly Indicators)

	1988:6	1988:7	1988:8	1988:9	1988:10	1988:11	1983	1984	1985	1986	1987
Total Employment—											
Millions of Persons	106.1	106.3	106.4	106.7	107.0	107.4	90.2	94.5	97.5	99.5	102.3
Service Industries	80.5	80.6	80.8	81.1	81.2	81.6	66.9	69.8	72.7	75.0	77.5
Goods Industries	25.6	25.7	25.6	25.6	25.7	25.9	23.3	24.7	24.9	24.6	24.8
Total Compensation—											
Billions of Dollars	2427.5	2451.7	2459.1	2475.0	2511.6	2520.4	2520.4	1838.6	1974.9	2094.0	2248.4
Services	1733.1	1752.5	1758.9	1770.6	1794.6	1804.3	1153.6	1261.0	1365.7	1468.5	1598.6
Goods	694.4	699.2	700.2	704.4	717.0	716.1	716.1	577.6	609.2	625.5	649.8
Consumer Price Index— All Urban,											
Percent Change, Year-Over-Year	4.0	4.1	4.0	3.8	4.0	4.2	3.2	4.3	3.5	1.9	3.7
Services	4.5	4.6	4.5	4.2	4.5	4.8	3.5	5.3	5.1	5.0	4.1
Goods	3.2	3.6	3.4	3.7	3.6	3.5	3.0	3.4	2.1	-1.0	3.2
Services Leading Indicator Index (%)*	0.8	1.6	0.9	2.0	3.4	0.8	4.5	2.3	3.5	4.0	3.0
Leading Economic Indicator Index—total (%)*	2.4	0.6	1.7	1.0	1.7	1.2	15.3	3.6	3.1	6.5	5.3
Services Coincident Indicator Index (%)*	3.5	4.2	3.2	2.9	4.6	3.1	3.3	3.7	3.8	3.1	3.5
Service Industries Stock Price Index	89.2	88.7	87.9	91.0	94.3	91.7	54.4	53.0	66.2	86.3	95.4
S&P 500 Stock Price Index	270.7	269.1	263.7	268.0	277.4	271.0	160.4	160.5	186.8	236.3	286.8

* *Growth Rate expressed in six-month smoothed percent changes at annual rate.*

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Center for International Business Cycle Research and The Boston Company Economic Advisors, Inc.

THE COALITION OF SERVICE INDUSTRIES was formed in 1982 to increase public awareness of the expanding role of the service sector in the U.S. economy. One of the priorities of the Coalition is to improve the adequacy of statistical programs in their measurement and analysis of the service sector.

THE SERVICE ECONOMY is a product of the CSI Task Force on Data Collection and Statistical Improvement. Comments or suggestions should be directed to Maria Eli of CSI, at 202/467-3054.